UNITED STATES PATENT AND TRADEMARK OFFICE

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10/733,813	12/12/2003	Eric Le Bars	4590-253	8845

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/733,813	LE BARS ET AL.
	Examiner	Art Unit	
	Christopher Findley	2621	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☐ Claim(s) _____ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☐ Claim(s) _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>*12/12/2003*</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   A series of singular dependent claims is permissible in which a dependent claim

refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any

claim which does not also depend from said dependent claim. It should be kept in mind

that a dependent claim may refer to any preceding independent claim. In general,

applicant's sequence will not be changed. See MPEP § 608.01(n).

2.   Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent

form for failing to further limit the subject matter of a previous claim. Applicant is

required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper

dependent form, or rewrite the claim(s) in independent form. The content of claim 19

should be listed in a dependent claim after claim 20, since it depends upon claim 20.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

4.   Claim(s) 19-20 is/are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter as follows. Claim(s) 19-20 define a

signal with descriptive material. While "functional descriptive material" may be claimed

as a statutory product (i.e., a "manufacture") when embodied on a tangible computer

readable medium, a signal embodying that same functional descriptive material is

neither a process nor a product (i.e., a tangible "thing") and therefore does not fall within

one of the four statutory classes of § 101. Rather, "signal" is a form of energy, in the

absence of any physical structure or tangible material, as set forth in the Interim

Guidelines, Annex IV (c).

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   **Claims 1-8 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated**

by Teichmer (US 6380991 B1).

Re claim 1, Teichmer discloses a method of splicing digital signals comprising at

least two types of data packets: I and P packets of complete data and B packets of

differential data, said method comprising the following steps: receiving a first digital

signal s1 (Teichmer: Fig. 2, stream 1); receiving a second digital signal s2 (Teichmer:

Fig. 2, stream 2); receiving a splicing command Cc(T.sub.0) (Teichmer: Fig. 2, "GOP

boundary" labeled on stream 1 indicates the start of a splicing operation); transmitting

the first signal s1 before the splicing indicated by the splicing command Cc(T.sub.0)

(Teichmer: Fig. 2, the portion of the Freeze Splice stream before the (previous GOP

extended) section); and transmitting the second signal s2 after the splicing indicated by

the splicing command Cc(T.sub.0) (Teichemer: Fig. 2, the portion of the Freeze Splice

stream after the (previous GOP extended) section), wherein transmission of the second

signal s2 starts with the I or P packets of complete data closest to the instant To

indicated by the splicing command Cc(T.sub.0) in such a way that the reproduction of

the second signal s2 starts with the reproduction of the I or P packet of complete data

(Teichmer: Fig. 2, presentation of the Freeze Splice stream from stream 2 starts at the

first I frame (I_{19})).

Re claim 2, Teichmer discloses that transmission of the first signal s1 ends with

transmission of the last I, P or B packet of data received before the start of transmission

of the second signal s2 in such a way that the reproduction of the first signal s1 ends

with the reproduction of an I or P packet of complete data before the start of

reproduction of the second signal s2 (Teichmer: Fig. 2, Freeze Stream (previous GOP

extended)).

Re claim 3, Teichmer discloses that transmission of the I or P complete data

packets before the B differential data packets is configured in such a way that the

reproduction of these I or P packets of complete data is performed after the

reproduction of the B packets of differential data (Teichmer: Fig. 2, B frames use bi-

directional prediction and the transport order is different from the presentation order).

Claim 4 has been analyzed and rejected with respect to claim 3 above.

Re claim 5, Teichmer discloses that transmission of the first signal s1 ends with transmission of the last B packet of differential data received before the start of transmission of the second signal s2 and preceding an I or P packet of complete data (Teichmer: Fig. 2, frame B_{84} is extended through the black period).

Re claim 6, Teichmer discloses that the first and second signals s1 and s2 comprise several types of complete data packets, including at least one I packet of introductory complete data and at least one P packet of predicted complete data, and several B packets of differential data are assembled in a group of packets GOP comprising only one I packet of complete introductory data with which the GOP starts, the group of packets enabling the P packets of predicted complete data and the B packets of differential data to be transmitted in an order different from that of the reproduction of the P and B packets (Teichmer: Fig. 2).

Re claim 7, Teichmer discloses that transmission of the second signal s2 starts with the I packet of introductory complete data closest to the instant To indicated by the splicing command Cc(T.sub.0) (Teichmer: Fig. 2, I_{19} is the first I frame from stream 2 contained in the Freeze Stream transport stream).

Re claim 8, Teichmer discloses that the first signal s1 and the second signal s2 are video signals (Teichmer: Abstract section, lines 1-6).

Re claim 20, Teichmer discloses that a digital broadcasting signal comprising a first signal s1 followed by a second signal s2 starting with a packet of complete data obtained by a splicing method (Teichmer: Fig. 2).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 9-15 and 17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Teichmer (US 6380991 B1) in view of Fox et al. (US 6181383

B1).

Re claim 9, Teichmer discloses a majority of the features of claim 9, as

discussed above in claim 1, but does not explicitly disclose that the first signal s1 and

the second signal s2 further comprise audio frames. However, Fox discloses a method

for preserving synchronization of audio and video presentation when splicing transport

streams, where the transport stream includes both video and audio data (Fox: Fig. 2).

Since both Teichmer and Fox relate to splicing media streams, one of ordinary skill in

the art at the time of the invention would have found it obvious to combine the frame

freezing of Teichmer with the audio/video synchronization of Fox in order to fill the video

gap with repeated frames when the audio component of the first stream extends beyond

the end of the video component when splicing with a second stream (Fox: Fig. 4, gap

440). The combined method of Teichmer and Fox has all of the features of claim 9.

Claim 10 has been analyzed and rejected with respect to claim 9 above.

Re claim 11, the combined method of Teichmer and Fox discloses that transmission of the second signal s2 starts with the audio frame configured to be reproduced with a picture constituted by the I packet of introductory complete data with which transmission of the second signal s2 is started (Fox: Fig. 2, access unit 224_1).

Re claim 12, the combined method of Teichmer and Fox discloses that transmission of the first signal s1 ends with: the last audio frame starting before the instant of the start of transmission of the second signal s2 if the time interval between the start of transmission of the audio frame and the start of transmission of the second signal s2 is greater than or equal to the duration of an audio frame (Fox: Fig. 3, access unit 314_4), or, if not, the second last audio frame starting before the instant of the start of transmission of the second signal s2 (Fox: Fig. 2, access unit 214_3).

Re claim 13, the combined method of Teichmer and Fox discloses during transmission of the first signal s1, transmission of the drift AI of the clock h1 of the first signal s1 (Fox: column 5, line 64, through column 6, line 3), and during transmission of the second signal s2, transmission of the drift .DELTA.2 of the clock h2 of the second signal s2 (Fox: column 6, lines 31-41).

Claim 14 has been analyzed and rejected with respect to claim 13 above.

Re claim 15, the combined method of Teichmer and Fox discloses that the digital signals are MPEG-encoded (Teichmer: Abstract section, lines 1-6), comprising groups of packets constituted by groups of pictures (GOP), the packets of complete data

constituted by the I and P pictures, the packets of differential data constituted by the B

pictures (Teichmer: Fig. 2), and audio frames (Fox: Fig. 2).

Re claim 17, the combined method of Teichmer and Fox discloses a first input

adapted to receive a first signal s1 (Fox: Fig. 1, element 110, multiple inputs), a second

input adapted to receive a second signal s2 (Fox: Fig. 1, element 110, multiple inputs),

an output adapted to transmit a resulting signal formed by the first signal s1 before the

splicing indicated by the splicing command $Cc(T.sub.0)$ and the second signal s2 after

the splicing indicated by the splicing command $Cc(T.sub.0)$ (Fox: Fig. 1, element 140).

5.   Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Teichmer (US 6380991 B1) in view of Kelly et al. (US 6952521 B2).

Re claim 16, Teichmer discloses a majority of the features of claim 16, as

discussed above in claim 1, but does not specifically disclose watermarking of the

splicing command $Cc(T.sub.0)$ in the first signal s1, wherein reception of the splicing

command comprises reading the splicing command $Cc(T.sub.0)$ watermarked in the first

signal s1*. However, Kelly discloses a method for editing digital video recordings,

where splice point information is embedded in the transport stream (Kelly: column 3,

lines 11-20) and the splice point information is processed by a microprocessor (Kelly:

Fig. 2; column 7, line 62, through column 8, line 4). Since both Teichmer and Kelly

relate to splicing media streams, one of ordinary skill in the art at the time of the

invention would have found it obvious to combine Kelly's preconfigured media stream

stored on a disc with Teichmer's method for splicing media streams in order to provide a

constant picture display (Teichmer: Fig. 2, repeated B frames) when splicing streams

during the execution of a predetermined program sequence (Kelly: column 1, lines 53-

60). The combined method of Teichmer and Kelly has all of the features of claim 16.

6.   **Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over Teichmer (US 6380991 B1) and Fox et al. (US 6181383 B1) as applied to

claims 9-15 and 17 above, and further in view of Kelly et al. (US 6952521 B2).

Re claim 18, the combined method of Teichmer and Fox discloses a majority of

the features of claim 18, as discussed above in claims 1 and 17, but does not

specifically disclose a watermark reader connected to the first input. However, Kelly

discloses that the embedded splicing point information is read and processed by a

microprocessor (Kelly: Fig. 2, uP 114 and input unit 130; column 7, line 62, through

column 8, line 4). Since Teichmer, Fox, and Kelly all relate to splicing media streams,

one of ordinary skill in the art at the time of the invention would have found it obvious to

combine the splicing methods of Teichmer and Fox with the embedded splicing point

information and disc storage of Kelly in order to execute a predetermined program

switching sequence (Kelly: column 1, lines 53-60). The combined method of Teichmer,

Fox, and Kelly has all of the features of claim 18.

Re claim 19, the combined method of Teichmer, Fox, and Kelly discloses at least

one assembly for the production of a first signal s1 (Fox: Fig. 1, broadcast/distribution

network 112), a transmission assembly comprising a splicer (Fox: column 8, lines 34-

43) according to claim 20, wherein the production assembly comprises a watermark

writing device receiving the first signal s1, a splicing command Cc(T.sub.0) and giving a

first signal s1* watermarked by the splicing command (Kelly: column 3, lines 11-20).

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure:

    a.   System method and apparatus for seamlessly splicing data

Yoshinari (US 6567471 B1)

    b.   Method and apparatus for splicing

Anderson et al. (US 7027516 B2)

    c.   Information processing apparatus

Komori (US 20030123556 A1)

    d.   Signal processor

Saunders et al. (US 6529555 B1)

Contact

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Christopher Findley whose telephone number is (571)

270-1199. The examiner can normally be reached on Monday-Friday 7:30am-5pm,
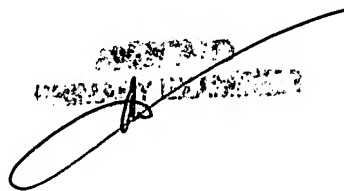
Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher Findley/